



THOMAS G. NEWMAN, Editor.

Vol. XXIII. June 22, 1887. No. 25.



**Beautiful Flowers** are now everywhere to be seen. The bees are attracted by their hues and sweetness, sip the honey from their tiny wells, and with a happy buzz fly to their homes with their rich treasures.

Bee-kissed flowers blooming in every place, Through this beautiful world of ours, And, dear as a smile on an old friend's face, Is the smile of the bright, bright flowers!

**Please Notice** that the date of holding the Convention at Chicago next November occurs during the *second week* of the Fat Stock Show, when excursion rates will be very low.

**Where to Keep Honey** is the title of Leaflet No. 3. For prices see the second page of this paper. If you wish to see a sample of it before purchasing, send for it.

**"Das Bienenwachs und seine Verwertung"** is the title of a new pamphlet by Mons. J. Dennler, editor of the Alsatian bee-paper. Its subject is the making of comb foundation by the plate and book systems. We acknowledge the receipt of a copy of it "with the author's compliments."

**Paste for labels on tin pails** may be made thus:

Make a thin solution of white glue, then thicken it with wheat flour until it is about the consistency of paste. This is to be made the same as any other paste. Cover one side of the label with the paste, then put on the honey can or pail, and I think you will not have any trouble about labels coming off.

Paste made in this way will hold the labels to the tin so well that they will not come off. Just try it, if you want to make your honey to be attractive, and to sell readily. A nice label on a can of honey helps wonderfully.

**Union Convention at Chicago.**—The North American Bee-Keepers' Society and the Northwestern Bee-Keepers' Society will meet in joint convention in Chicago, Ill., on Wednesday, Thursday and Friday, November 16, 17 and 18, 1887. The Secretary's notice will be issued soon.

**Laying Workers.**—In an exchange we notice the following item concerning some microscopic investigations made by Mr. Frank Cheshire of laying workers. His experiments are always thorough, and the reports concerning them are read with much interest by his apian friends throughout the world. Here is the item:

At a recent meeting of the Royal Microscopical Society, Mr. F. R. Cheshire called attention to some specimens of bees, known as "fertile workers." It was generally well known that in the bee-hive all the eggs were usually laid by the queen, and in her absence no ovipositing occurs until they have taken some of the eggs remaining in the hive, and by a special feeding of the larvae, have been able to produce fresh queens. If, however, it should happen that in a hive, which has lost its queen, there are eggs available for this purpose, it was found that some of the workers under some special circumstances, which could not be very clearly explained, became capable of laying eggs, but that such eggs produced drones only. These bees were known as fertile workers, and though there could be no doubt as to their frequent existence, they were very difficult to catch, owing to their being the same in appearance as the ordinary workers. He now exhibited two of these fertile workers having the ovaries drawn out of the bodies, and attached to the stings and abdominal plates, so as to show that they really were workers. There was a remarkable peculiarity to be observed in connection with the ovarian tubes of these insects—every ordinary worker possessed an undeveloped ovary which it was very difficult both to detect and dissect: but when under the influence of some stimulus the worker became fertile, a number of points began to appear in the tubes which afterward became developed, and it would seem that the eggs were developed in alternation, an examination of the tubes showing them to contain developed eggs alternating with others in an undeveloped condition, and of which some very curious instances were seen in the specimens before the meeting.

**In Canada** the bees "are in clover," and the honey crop promises well. The *Canadian Bee Journal* says:

This bids fair to be the bee-keepers' jubilee year; as thus far we have had a continuous flow of honey.

Mr. R. F. Holtermann, editor of the *Canadian Honey-Producer*, writes as follows, dated at Brantford, Ont., June 16, 1887:

On Monday morning, June 13, I had 50 pounds of mostly clover honey from one upper story, and put another full upper story on, to give the bees room. The same room I gave to a number of others, and took from 30 to 40 pounds of honey. Bees have been "booming" ever since. Reports generally through Ontario are good. Swarming has been very early, but we are giving bees ventilation, shade and room, and keeping down increase.

**Diseased Bees.**—There is a bee-disease in Germany called "Maikrankheit," because it is usually seen in May. The bees have distended abdomens, because they have not been able to void their feces, after partaking of pollen collected in the early spring after it had been touched by frost. A good remedy is to put a little salicylic acid in syrup and feed it to them—keeping the hive dry, and preventing the accumulation of moisture inside.

**Our New Book List** on the second page is the place from which to select the book you want. We have a large stock of every book there named, and can fill all orders on the day they are received.

**Home Markets** for honey should be created in every village and city in the United States. The price of honey can be largely increased if bee-keepers will but market their honey at home instead of shipping it to "the great marts of trade"—there to be sacrificed by those who have no interest in it except to get their "commissions" from its sale, and accept the first offer that may be made for it, no matter how low the price named may be.

Some time since Mr. Pond made these remarks concerning the habit of bee-keepers of shipping their honey to a large city instead of developing their home markets. He said:

Many producers of honey are not salesmen, and consequently have no real knowledge of the best ways and means of disposing of their goods. Instead of making a market for their surplus honey, and disposing of it in that market, they all rush it into some large city, and, of course, overstock that market at once. Compare for a moment the crop of honey of the last ten years with the number of people in this great country, and how much per capita will it show up? There are thousands and thousands of people who would gladly buy honey, if they could do so near their homes, who never see an ounce from one year's end to another.

Ten thousand home markets, each consuming a ton, are far better for the regular sale of the honey which is produced than to depend upon one market taking the whole of the ten thousand tons. What injures the pursuit most is an uneven distribution of the product. Let us see if this cannot be remedied this season, at least in part.

**Well! How Funny!**—Here is an item from one of the mammoth metropolitan weeklies, which may at least produce a smile at the reporter's ingenious way of "dressing up" a "fancy" to be presented to the credulous reader:

That bees are remarkable architects for insects is conceded, but Father Poupain Bridoul, S. J. (Lille, 1872), tells of a hive in which the bees built of wax a chapel, with doors and windows, bells and vestry. In this chapel the bees collected and made music. The reason was at last discovered. A sacrilegious thief who had stolen a pyx from an altar, threw it into the hive while under fear of being caught, and the good bees at once took care of it in this artistic fashion.

We never before heard that bees were accused of being over religious! The only way they have been said to "sing" in church is when they have found a home under the roof or in the walls of the building, when their gladness shows itself in a merry and satisfied "hum."

Bring on your next "funny story," and get a laugh in return therefor.

**Frank Leslie's Sunday Magazine** for July contains two important historical articles, which are especially timely in view of the possible European complications. These are, "Francis Joseph I. and the Austria Hungary Empire," by George Makepeace Towle, and "When Greek meets Turk," by Oscanyan. Read together they afford a clear view of Central and Southeastern European politics. Several lighter articles, beautiful poems, and many fine illustrations add to the interest and charm of the mid-summer number of the favorite Sunday magazine.

## QUERIES

With Replies thereto.

[It is quite useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

### Queenless Colony Working.

**Query 433.**—Can a queenless colony be made to work satisfactorily? If so, how would you manage it during the honey-flow?—V. V. H., Ohio.

Give the bees a chance to rear a queen.—DADANT & SON.

I know of no practical method.—C. W. DAYTON.

I have had no practical experience that way.—H. D. CUTTING.

By giving them some larvæ and eggs with which to start queen-rearing.—JAMES HEDDON.

Not as much so as one that has a queen, and for that reason I should introduce a young queen at once.—J. E. POND.

Yes, it will work well if it has a little brood from which to start queen-cells. Extract the honey.—W. Z. HUTCHINSON.

I have had them do very good work, yet on the whole I believe it is best to have a queen present.—C. C. MILLER.

I prefer to have a queen in each colony. Some claim to make queenless colonies do good "biz," but I am not among that number.—G. M. DOOLITTLE.

A strong queenless colony will gather more surplus in a given time than a colony that is rearing much brood. But at the end of the time you will have the surplus *without* the colony.—J. P. H. BROWN.

I have not succeeded in making queenless colonies store comb honey to any extent. Bees never work with so great energy and advantage as when they have a quantity of young larvæ to feed and care for.—G. L. TINKER.

Yes, if the queen is just removed, and they have brood in all stages. They will then do their best. If they are hopelessly queenless—that is, have no eggs or young brood—they will do very little work.—A. J. COOK.

Yes, by proper management. I have written several articles showing how it can be done, but I have found that better results can be had by letting the bees have a queen, but restrict her to a very small brood department. But it does not pay to cramp the queen beyond certain limits, if the bees are to be kept in good conditions.—G. W. DEMAREE.

A queenless colony without brood or eggs will very soon become discouraged, and refuse to work. If they have "brood" to care for, they will work well while rearing a queen.—THE EDITOR.

### Dividing, or Natural Swarming.

**Query 434.**—Of the two methods of securing increase, dividing and natural swarming, which do you consider the better for a large apiary?—Ward, Wis.

**Natural Swarming.**—W. Z. HUTCHINSON.

Increase by dividing colonies, by all means.—DADANT & SON.

**Natural swarming.**—G. M. DOOLITTLE.

It depends upon the locality, pasturage, etc. In my locality I prefer natural swarming.—J. P. H. BROWN.

Natural swarming, if it is practicable. If we have to leave our bees all day, it cannot be practiced safely.—A. J. COOK.

It depends upon the man, and perhaps on the place. I should be delighted never to see another natural swarm, even if I wanted to double every year.—C. C. MILLER.

Sometimes one, sometimes the other. I prevent swarming if possible, and make the increase by dividing at the close of the honey harvest. If they must swarm, then make the increase in that way; both methods are usually employed. If honey was no object, I prefer natural swarming.—C. W. DAYTON.

Natural swarming vigorously discouraged, for in the large honey-producing apiary we do not want any increase. If I did, and especially if I had plenty of empty combs, I might prefer and employ dividing colonies to obtain it.—JAMES HEDDON.

Dividing. This, however, is a mooted question, and one that depends so largely upon the man and the location, etc., that it is really an individual matter, and no positive rule can be laid down in regard to it.—J. E. POND.

I would not be confined to any one method; it is best to practice both. In many cases I prefer natural swarming. Too many good colonies are ruined by untimely dividing. The theory of dividing is all right, but just when and how to do it is a difficult matter to one not thoroughly posted.—H. D. CUTTING.

Natural swarming, all the time. When several swarms issue and settle together they may be separated by throwing them on a sheet, and the queens secured. Then divide up the bees and give a queen to each lot in hiving. Where increase is not desired, it is better to take out all the queens but one, and hive all together, giving sufficient room in the supers. In any case, I prefer the contracted brood-case and queen-excluding honey-board in managing swarms.—G. L. TINKER.

In a "large apiary" increase is usually undesirable. The object of the apiarist would be, a good crop of honey, and no increase. In such case "natural swarming" would be discouraged in every possible way, and "dividing" practiced only in such a way as to prevent swarming.—THE EDITOR.

### Uniting Weak Colonies.

**Query 435.**—Would you advise uniting weak colonies in the spring? If not, what course is best to pursue with them?—M. C. G., Ills.

See my answer to Query 432.—JAMES HEDDON.

See my answer to Query 432.—J. E. POND.

See my answer to Query 432.—H. D. CUTTING.

See my answer to Query 432.—J. P. H. BROWN.

Not until just before the honey harvest.—W. Z. HUTCHINSON.

Let them be until June, then unite them.—G. M. DOOLITTLE.

No. I get them as strong as possible, and unite them to form strong colonies in time for honey-gathering.—C. W. DAYTON.

If they have queens, confine them, pack around them closely, stimulate gently, and as they and other strong colonies can bear it, give them frames of capped brood.—A. J. COOK.

No. I would build them up into strong colonies. If I had more bees than I wanted, and could not sell them, I would unite the weak colonies just before the white clover harvest begins.—G. W. DEMAREE.

If a colony is too far gone to help itself, it will not amount to much when united with another. But the help of weak colonies, from strong colonies in the spring, is very efficient, if carefully done.—DADANT & SON.

See my answer to Query 432. There seems to be but one practicable plan to unite either weak or strong colonies, and it is done as follows: Take out one of the queens and move the colonies to be united a few feet each day until near each other. In 9 days cut out the queen-cells and place one colony over the other. If the bees are sprayed with essence of peppermint, there will not be a bee killed, and but very few without it.—G. L. TINKER.

No. Give them frames of brood from strong colonies if you have them, and they will build up rapidly.—THE EDITOR.

**The Western World Guide and Handbook of Useful Information**, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two new subscribers besides his own, with \$3.00, for one year, we will present a copy of this valuable book.



## Correspondence.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♂ north of the center; ♀ south; ◊ east; ◊ west; and this ◊ northeast; ◊ northwest; ◊ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

### Making Nuclei—Uniting Colonies.

G. M. DOOLITTLE.

[Mr. G. N. Benjamin, of Tampa, Fla., asks that the following article, which was written for the BEE JOURNAL several years ago, be re-produced for the benefit of new readers, especially as it was referred to by Mr. Doolittle in his article on page 309 for May 18, 1887. The article is as follows:—Ed.]

I have heretofore told the readers of the AMERICAN BEE JOURNAL how I had tried all the then known plans of making nuclei, none of which suited me on account of so many of the bees going back to the colony from which they were taken. Where an apiarist has two apiaries several miles apart, bees can be brought from the apiary furthest from home with which to form a nucleus, so as to be a success every time. But as all do not have such an apiary, and there is much trouble about the plan, to those who do have, it is quite an object to have a plan by which a nucleus can be formed when and where the apiarist wishes. To accomplish this object, I studied out the plan of caging a frame of hatching brood, and by putting a virgin queen two or three days old into the cage, I had a plan that has worked much better than any that I had previously tried. However, in some cases this plan partially failed, as the bees in the hive, in which the caged frame was placed, would partially desert one side of the cage so some of the hatching brood would become chilled, while again some would worry and try to get out until at the end of five days a portion of the newly hatched bees would be dead upon lifting the frame from the hive, at the time of placing it where it was to stay.

At the same time that I was practicing the plan described on page 344 (1888), I was also trying another plan which was at first designed for the safe introduction of virgin queens, to do which I proceeded as follows: I made a box by taking two pieces of wood 6x6x $\frac{1}{4}$  inches, and two other pieces 12x6x $\frac{1}{4}$  inches, the latter being nailed to the former, which made a box 10 $\frac{1}{2}$  inches long by 6 wide by 6 deep, without sides. I next got two pieces of wire-cloth 12 inches long by 6 inches wide, one of which was nailed permanently to one side of the box, while the other was left so it was removable at any time. In the top of

the box was bored a large hole into which a large tin funnel (such as is used by those selling bees by the pound) could be inserted. Near one end I bored a  $\frac{3}{4}$ -inch hole through which I could put in a virgin queen as soon as the bees from a nucleus were shaken through the funnel into the box. The box was then placed in a dark cellar until night, when it was put over the combs of the nucleus from which the bees were shaken, when the removable side of the box was taken off and the bees allowed to return to their combs during the night.

In this way I thought to introduce and get a virgin queen to laying in two or three days after I had sold a laying queen from a nucleus, which, in turn, could be sold and another introduced in like manner, thus making it profitable to rear queens at the low price of \$1 each. But I soon found that not more than one queen out of three thus put into the box would be accepted by the bees, while those which were accepted were so slow in getting fertilized (some requiring ten or more days), that I became disgusted and went back to the cell-plan.

In one of these experiments I took the bees from a full colony to see if I could succeed better, but they killed the virgin queen almost as soon as I put her into the cage. Just then I was called away, so I hastily placed them in the cellar and left them. When I returned towards night, I thought I would see if I could form a nucleus of them, by placing a frame of brood and one of honey in an empty hive and turning them upon it. Accordingly I rigged the hive as above. Before I had all completed it was nearly dark, so I felt sure that I could succeed, as no bees could get back home until morning. Before sunrise the next morning I saw that these bees had not clustered on the brood at all, but had crawled all over the hive, many of them being outside, from which place they were flying for home.

When I went to the hive from which they came, imagine my surprise to find that they were being treated as strangers, some even being killed, so that not one was allowed to enter the hive. Suffice it to say that all were lost and killed, but from it I learned one thing, which is, that bees confined in a small space with a different queen from their mother, whether dead or alive, would be disinherited if kept in such a space for eight or more hours.

Soon after this I had a queen sent me very unexpectedly, and as I did not value her very highly, I thought to form a nucleus with her, and resolved to try the caging of bees with her. After getting the bees into the cage, I feared to let her in with them, so I waited a couple of hours, at which time I found the bees in great agitation from knowing that they had no queen with them. I now let the queen run in through the small hole, when a more happy lot of bees was never seen. These bees were found compactly clustered in the top of the

box the next morning, when they were hived on two frames of brood, and soon built up into a colony. From all of the above I learned the following, which I believed to be the best known plan of forming nuclei:

Procure a box and funnel, as described above, and go to any hive that can spare from it, from a tea-cupful to a quart of bees, according to the size of the nucleus desired; take out a frame or frames having bees on the combs (be sure you do not get the queen), and place it on the outside of the hive. Give the frame several sharp knocks with a little stick, to cause the bees to fill themselves with honey, and when so filled shake as many bees down through the funnel into the box as you wish in your nucleus. Take out the funnel and close the hole, when you will put the frame from which you shook the bees back into the hive and close it. Now take the box of bees to the cellar, or a darkened, cool room, and leave them two or more hours, when you will give them (a laying queen) any poor queen you care little for, or a good one if you choose.

To put the queen in, put the box down suddenly, so that all the bees will fall to the bottom, when the queen is allowed to run in through the small hole. I generally form the nucleus about 1 p.m., and let the queen in at 3 p.m. Early the next morning, take a frame having a very little brood in it, and one with honey, and place in a hive where you wish the nucleus to stay, using a division-board to contract the size of the hive.

Now, hive the little colony from the box the same as you would any swarm, and they will go to work immediately. In two or three days form another nucleus in the same way, and when you are ready for the queen, go to this last made nucleus and get this same queen to use for the next, which is to be made from the bees in the box, and in this way keep on forming nuclei as long as you wish them. In this way I made 3 queens form 60 nuclei one season. After the queen is taken away from the first formed nucleus, to form the second, the nucleus is to be treated the same as any queenless nucleus is treated, and when virgin queens are introduced there need not elapse more than a week before the nucleus will have a young laying queen.

There are three reasons for using a laying queen in forming the nucleus: the first of which is that the bees will always accept her and behave just as you wish them to; second, this queen will furnish all the eggs that the nucleus can care for during her short stay, so they are well supplied with young brood at the outset; and third, a laying queen can be taken from the nucleus sooner by the above plan, as where a virgin queen is used to form the nucleus, such queen is exceedingly slow about becoming fertilized. In conclusion I will say that I know the plan will work if followed as I have given directions.

Borodino, ⊙ N. Y.

British Bee Journal.

## History of Bees—Interesting Facts.

WILLIAM RIATT.

The ancients are known to have kept bees in a domesticated state more than 2,000 years ago, and that probably much in the same fashion as is common in Eastern countries to this day. Hives were made out of hollowed logs, or, where the timber was scarce, of cylinders of clay or of wicker-work plastered with clay. Such hives are still used in the East, where it never has been the practice to kill the bees in order to get their honey. These logs or cylinders are placed in a horizontal position, and the honey taken from the end most distant from the entrance. The natural tendency of bees to store their surplus at a distance from the entrance is thus taken advantage of. In the Russian log-hive another advance is made, based on the tendency of the bees to store above as well as beyond the brood-nest. The hives are raised a little on the back, and thus the certainty of finding virgin comb at the further end is increased.

There is evidence in ancient chronicles, and among the laws of our Anglo-Saxon forefathers, that bees were at one time altogether wild in this country. Previous to the eighth century they were classed with foxes and others as incapable of private ownership. Whoever found them in the woods was entitled to their honey and wax. The honey was highly esteemed as an article of food, and was largely used in making mead and in medicine.

The wax was in great demand by the clergy, who taught that bees had been sent from heaven because the mass could not be celebrated without wax, and under their influence they were gradually domesticated, being kept in hollow logs or hives of bark (Lat., *Rusca*). Hence, a hive of bees was called a "rusca" of bees, a word surviving to this day as a name for a straw-skep. As bees now come to be looked on as a property, the law recognizing the right to a wild swarm as belonging to the person on whose land it had settled for three consecutive nights. If he failed to discover it within that time, the finder had a right to 4d., and if that sum were not paid he might claim the sum. At that time a "rusca" of domesticated bees was valued at 24d.

Under the stimulus of a demand for honey and wax we find great lords, about the middle of the tenth century, having *beo ceorls* specially detached to attend on the bees, and the slaves gradually becoming serfs who paid their feudal lord a fixed amount of the produce of their hives. About this time also the name "rusca" often gives place to the Anglo-Saxon word *beo cest* (bee-chest), or the Latin word *alvearia*, which marks an advance from mere shells of bark to more regular hives. Domesday Book mentions them repeatedly, and they were even tithed as valuable property.

Comparatively little progress was made in bee-keeping until the close of the last century, when the discoveries of Francis Huber afforded the ground for a great advance. Previous to this, the natural history of the bees, and especially of the queen, was very imperfectly understood. Huber was the first to announce the true nature of the three classes of bees found in a hive—the queen, workers and drones. The German Shirach and the Scottish Bonner discovered the method of causing bees to rear queens at pleasure. At a latter date Dr. Dzierzon and Baron Berlepsch established the fact of the parthenogenesis of queens—that is, of the power they have of producing male progeny while still in a virgin state. They also proved that queens mate in the open air, and that within from 2 to 20 days of their birth. The impetus thus given to bee-keeping was followed, as has already been mentioned by those welcome mechanical aids, the frame hive, comb foundation, etc., which have brought bee-keeping to the position of a science.

This sketch would be imperfect without at least a mention of those agencies of the present time for the diffusion of knowledge in bee-matters, viz., bee-papers and associations. These are now established in Germany, Italy, France, Switzerland, America and England. In England nearly every county has its association, and Scotland and Ireland have several, most of these being affiliated with the great central association of British bee-keepers, whose headquarters are in London.

Simultaneously with the establishment of associations have come those interesting and instructive exhibitions of honey and appliances, now the order of the day, by a visit to which a beginner will learn more in an hour than he could formerly have done by reading and practice for a season.

## Haldimand, Ont., Convention.

The Haldimand Bee-Keepers' Association met at Nelles' Corners, Ont., on Tuesday, May 31, 1887, with President Kindree in the chair. The minutes of the previous meeting were read by the Secretary, George Best, and approved.

## MARKETING HONEY.

The first question discussed was the marketing of honey. The President thought the best way of marketing honey was to put it up in small parcels in an attractive shape, and to offer none but the best quality.

Mr. Jack gave his views, saying that until honey was bought by large dealers, the same as cheese and other produce, the price would be low.

Mr. Armstrong said that marketing honey was like anything else—the best article sold more readily and brought the best price. The best packages for the local market were pint and quart sealers, and for shipping, the 60-pound tin vessels cased in wood are the best. Comb honey

should be put in cases holding not more than 24 sections.

## BEE-PASTURAGE.

The President advocated the planting of Alsike clover for bee-pasturage; it was our best honey-plant, and was excellent for cattle. He did not think it paid to plant anything especially for bees. Buckwheat was good for fall feeding.

Mr. Armstrong said that according to the report of the commissioners appointed to report on the Chapman honey-plant, it was the plant we needed. It was the best honey-plant known for yielding honey.

The Secretary advocated the planting of sweet clover in waste places, and on the roadside; it was an excellent honey plant, and was decidedly nicer looking than thistles and mullen stalks.

Mr. Vanderburgh advocated the planting of basswood for shade instead of maple; it was a good shade-tree, and one of the best for honey.

Several members expressed themselves in a similar way.

## PREPARING BEES FOR WINTER.

The President had prepared his bees for winter in one way for several years, and had been generally successful, but the past winter he had not been so successful, and he thought he would have to change his plan. He thought he would have to resort to cellar-wintering, or some such plan.

Mr. F. Rose said one cause of loss in wintering bees, was in putting the packing too close on top, so that the bees could not pass over the tops of the frames to their stores.

Mr. Armstrong said the first mistake in preparing bees for winter was in beginning preparations too late. When bees are disturbed late in the fall they fill themselves with honey, and are very liable to be troubled with diarrhea. If bees are prepared early, have sufficient stores, and properly protected, they will generally come through all right. The bees should be put as close together as possible; if the colony was weak the bees should be crowded on as few frames as possible; they should be provided with good stores, and well protected from the cold. He put some in a clamp, packed with sawdust, and others were wintered in double-walled hives, and he did not lose a single colony last winter.

Twenty members present reported 475 colonies in the fall of 1886, and 300 colonies on May 31, 1887.

Mr. Jack said he had a lot of old combs with sour honey, and moldy, and wished to know what to do with them. Mr. Armstrong said he would give one frame at a time to a strong colony, and in 24 hours the frame would be as good as new.

Mr. Jack also asked how to put in foundation so as to keep it straight. He fastened it at the top of the frame and one side, and the combs were crooked. Mr. Armstrong said it should be fastened only at the top, and the bees would fix it all right.



Mr. Fathers wished to know which is preferable, natural swarming or dividing. Mr. Rose preferred natural swarming.

On motion, Mr. W. Atkinson was appointed Director for Walpole, in place of Mr. Smith, removed.

The next meeting will be held at South Cayuga, on Saturday, Aug. 27, 1887.  
E. C. CAMPBELL, Sec.

For the American Bee Journal.

## Bee-Keeping Sacrificed to Prejudice.

Z. A. CLARK.

Thursday, June 9, 1887, was the day for us, the bee-keepers, to be laid upon the sacrificial altar, to be martyred for keeping bees in this city. Yesterday morning one of our citizens in three hours got up a petition to the Mayor and Council, asking an extension until July 1, in behalf of the bee-keepers, and got 104 names in three hours, lacking only four names of doubling the anti-bee petition, and our petition had about 40 of the 55 names on the anti-bee petition.

We had witnesses (citizens and farmers) to prove that bees were not a nuisance, and that they never interfere with sound fruit. I have the affidavits, and will forward them as they are sworn to, and you can publish any or all of them if you desire.

Arkadelphia, 9 Ark., June 11, 1887.

Here is an extract from a local paper:

"It would be well if our citizens (any and all of them) were to do as our neighbor Z. A. Clark has done. I believe only a short period since he in his idle time gathered around him a trio of old fashion 'bee-gums' of our Arkansas black bees, he thinking it not as profitable to knock the head off and cutting down to the sticks, as following the new idea of frame hives and imported Italian bees. With modern bee-keeping 'old things have passed away,' and now we find Mr. Clark in possession of as well-equipped an apiary, and as fine a strain of bees as any in Arkansas or elsewhere in this our 'land of the free and homes of the brave.' Who is the author of Mr. Clark's little business? Has it not cost him time and a great deal of hard work? Besides, does he not give labor and lend to the education of other young men that are to come on the stage after we shall have passed away? It is a hard matter for us to do any business that will meet the approval of all. But the 'good book' tells us to look to our neighbor's advancement. If we do this and follow our own employment, we will have no time to 'growl' at others.

"Let us have more bees, railroads, factories, schools, and above all, peace with our neighbors. If we cannot get these, let's go to work and cut down the dog-fennel that ruins our sweet milk. Let us do something for our youths that are eking out their existence loafing—on our steeds. Let us go to work, and have less 'gab!'—*Clipper*.

For the American Bee Journal.

## The Honey-moon.

EUGENE SECOR.

Out in the cool September air,  
At the close of a sultry, listless day,  
Sat a recently-wedded pair,  
Billing and cooing like doves in May.  
The full-orbed moon was as needless as  
bright,  
For the light of their eyes would have  
banished the night.

They heard the musical hum of the bees  
As they rested from labor at home in full  
hives;  
Buckwheat and goldenrod scented the  
breeze—  
The fragrant fruits of well-spent lives.  
So the air-castles built by this ardent young  
twain  
Were filled as completely with Hope's golden  
grain.

The "Katydid" sang to his voiceless bride,  
The crickets sharp love-notes brought no  
reply;  
In a sad parting strain the "whip-poor-will"  
tried  
To provoke from his mate a farewell sigh.  
But the bride in the gleaming returned each  
caress,  
And answered her husband's sweet words  
with a kiss.

Purple tinged leaves from the maples o'er  
head  
As silently fell as the soft-falling dew.  
They told of a summer too rapidly sped.  
Of severed attachments, tender and true.  
But the language of leaves had no meaning  
that night  
To the couple who sat in the pale, glimmer-  
ing light.

They talked of the happy days to come;  
They planned as only the young know how;  
They saw not the future as pictured by  
some  
Who remember the past with clouded brow.  
No visions of sorrow or pain were seen  
To mar the sweet peace on this quiet e'en.

'Tis thus, ever thus that young hearts and  
true,  
In Hope's dreamy realm delight to abide.  
To them the sunshine is sure to peer through,  
And Love's fairy-boat triumphantly glide.  
How good of the Father to thus kindly con-  
ceal  
The sorrows and losses that time will reveal!

Out in the early autumn air,  
Drinking the honey-laden breeze,  
We leave this happy, wedded pair,  
Under the purple-tinged maple trees.  
While the years come and go—as they will  
all too soon,  
They'll fondly revert to this bright honey-  
moon.

Forest City, Iowa.

Prairie Farmer.

## Swarming—Hints to Beginners.

MRS. L. HARRISON.

Much valuable time is spent at bee-conventions in discussing "Why bees swarm?" It would seem as appropriate to deliberate over the question "Why men and women join hand in hand and forsake their old homes. Is it for want of room? Or is it not that the hive was ventilated insufficiently?" In an old book that belonged to my father, and to his father before him, I find the answer: "A man shall leave father and mother and shall cleave unto his wife, and they twain shall be one flesh." Young men and women leave large, roomy, comfortable homes and dwell in cabins and dug-outs. It was ever

thus since the creation, when the edict went forth, "Multiply and replenish the earth." Since the morning stars sang together, the reproduction of animate nature has been going on, either by seeds, stolons, offsets, or runners. Bees increase by swarming, just as their Creator ordained they should. Swarm after swarm leave the parent colony (until there is scarcely a "corporal's guard" left) each one to establish a community of its own.

Why bees swarm is of little practical importance to bee-keepers; but how to control this propensity is one of the greatest considerations. The wealth of a bee-keeper does not consist in the number of colonies that he possesses, but in the strength of each individual colony. Some colonies will swarm four and five times, and even more. The first swarm will be first-rate, the second good, the remainder, together with the old colony, will be of little account. The two first will be a source of revenue, while the others will eke out a living during warm weather, but probably die the following winter. The colonies that swarm the earliest in the season are generally the best, and it is wise economy to save all the young queens possible. If they are allowed to swarm *ad libitum*, the little casts—which will contain young, vigorous queens that have been reared under the best possible conditions—should be built up into populous colonies. A queen regulates her productive powers according to her income, and the number of her subjects. If from any cause such as scarcity of honey or pollen, or too few bees to cover and feed the young, she simply exudes the eggs from her oviduct, not taking the trouble to deposit them in cells; the workers eat them as fast as she lays them. What a difference between her and the stupid hen, which will sit for weeks upon addled eggs, a piece of chalk, or even upon nothing at all.

June is the great swarming month in the Northern and Middle States. In our experience we have had swarms from May until the last of September. One season, one hived on Sept. 12, filled the hive and stored about 10 pounds of surplus comb honey.

Bees will swarm any time when there is a continuous flow of nectar, and a bee-keeper should always have empty hives in readiness to receive them. Italian bees swarm frequently before building queen-cells, or apparently making any previous preparation for the event. The exact time when a swarm is going to emerge, cannot be determined beforehand with any degree of certainty. If during the swarming season few bees leave the hive while the occupants of adjacent ones are busily engaged in gathering honey, a swarm may reasonably be expected. During sultry weather a swarm may issue as early as seven in the morning, but the greater part of them come forth from ten in the morning to three in the afternoon. Occasionally an after-swarm may issue as late as five in the

evening, but an old queen is seldom guilty of such indiscretion.

There is nothing more exhilarating to the bee-keeper, or anything that sends the blood tingling to his toes and finger tips than to hear the cry, "The bees are swarming." All is activity and life. A clean, sweet hive is in readiness, and a place chosen for it to stand. As soon as they are fairly clustered, if they are on the limb of a tree not valuable, it is either cut or sawed off, and carried to the hive, where they are gently shaken off on a sheet or board in front of it. If they do not readily find the entrance, they are scooped up, and put in it, or driven with a little smoke. Soon the watchword is sounded, a home is found, and they take up the march, seeming to see which can enter it first. If the queen does not enter the hive, remaining in the portico or on the outside of the hive, the bees will come out and cluster with her. A little attention should be given them until they are all in the hive and at work.

Bees always cluster when they swarm, near their old hive, and send out scouts to find a home. If they are not hived before their return, they will immediately dissolve and follow their leaders, and no inducement their owner may offer will cause them to settle.

Bees sometimes desert after they are hived, and when they issue from their new quarters take French-leave, and do not cluster. If a frame of uncapped brood is given them when hived, they seldom, if ever, abscond. There are many reasons why bees leave after hiving; the hive may be hot from standing in the sun before the bees were put into it; or it may have had too little ventilation. Charm them ever so wisely, and they will not accept a hive malodorous from kerosene or barn-yard smells. A swarm put into a clean, sweet, cool hive, and set in the shade, will show its appreciation of it by going to work with an energy that is surprising.

There are many devices used in hiving bees. Some prefer a light box perforated with auger holes, and fixed on to the end of a pole, which is placed underneath, or at the side of the cluster. The bees will enter the holes, and gather in or upon it, and can be carried to their hive. Others use a sack, kept open by a wire, and fastened to a pole.

Many bee-keepers practice clipping the queens' wings. When the swarm issues, she may be found hopping around in front of the old hive, and as soon as the bees find out that she is not with them, they return and search for her. The old hive could be removed; but a new one should be put in its place, which the bees will enter when they return. They can then be removed to a new stand, and the old one returned. Sometimes the clipped queen is caged and put where it is desired to have the bees cluster, and they will soon ascertain where she is, and gather there.

If decoy hives are placed in trees near bee-pasturage, a swarm may move into it during the season. Some

persons object to this, as not being a legitimate way to obtain bees, but we fail to see any objection to it, as the bees would have entered some hollow tree, and been lost to their owner even if this hive had not been provided for them. A person living on the prairie and owning 3 colonies of bees, lost them all during the severe winter of 1880-81, and let his hives remain where they were standing. The next summer absconding swarms, finding no hollow trees, filled them all.

Peoria, © Ills.

Official Report of U. S. Entomologist.

## Bees vs. Fruit—Experiments.

N. W. McLAIN.

[The following is an extract from the Official Report of Mr. McLain to the United States Entomologist, for the year 1886, and now just issued by the Department of Agriculture, at Washington, in its "Reports of observations and experiments in the practical work of the Division, made under the direction of the Entomologist."—ED.]

I have, according to your instructions, repeated my experiments of last year for testing the capacity of bees, under exceptional circumstances, to injure fruit; adding such other tests and observations as the very severe and protracted drouth permitted. The house used last season, 10 feet by 16 feet in size, having sides partly covered with wire cloth and large screen doors in each end, was used again this year. Two colonies of Italian bees, two of hybrids, one of Caucasians, and two of Syrians were confined in this house.

These colonies were without food in their hives, and at intervals of three or four days were fed a little syrup for the purpose of keeping up their vigor, and to prevent dying from starvation. A wood-stove was placed in the house, and a high temperature was maintained for a number of hours each day.

The conditions incident to an unusually severe and protracted drouth were present within and without. The bees were repeatedly brought to the stages of hunger, thirst, and starvation, the test continuing for forty days.

Through the favor of Mr. T. T. Lyon, President of the Michigan State Horticultural Society, I obtained thirteen varieties of choice grapes from A. G. Gulley, of South Haven. Every inducement and opportunity was afforded the bees to appease their hunger and thirst by attacking the fruit which was placed before them. Some of the bunches of grapes were dipped in syrup and hung in the hives between the combs, some placed before the hives on plates, and grapes were suspended in clusters from the posts and rafters. The bees lapped and sucked all the syrup from the skins, leaving the berries smooth.

They daily visited the grapes in great numbers, and took advantage of every crack in the epidermis or opening at the stem, appropriating to their use every drop of juice exuding therefrom, but they made no attempt to grasp the cuticle with their mandibles or claws. I removed the epidermis carefully from dozens of grapes of various kinds, and placed them on plates before the hives. The bees lapped up all the juice on the outside of the film surrounding the segments of the grape, leaving this delicate film dry and shining, but through and beyond this film they were not able to penetrate. I punctured the skins of grapes of all kinds by passing needles of various sizes through the grape and placed these before the bees. The needles used were in size from a fine cambric needle to a packing needle. The amount of juice appropriated was in proportion to the size of the opening in the skins, and the number of segments of the grape broken. The same was true in the case of grapes burst from over-ripeness. Bees are not only unable to penetrate the epidermis of the grape, but they also appear to be unable, even when impelled by the direct necessity, to penetrate the film surrounding the berry, even after the epidermis is removed. Grapes so prepared, without exception laid before the hives until dried up. If but one segment of a grape be broken by violence or by over-ripeness, the bees are unable to reach the juice beyond the film separating the broken from the unbroken segments until further violence or decay permits an entrance for the tongue. Clusters of sound grapes which I hung between the comb frames in the hives occupied by strong colonies were unbroken and sound after fifteen days' exposure in the hives. The skins were polished smooth, but none were broken. I also stopped up the entrance to several hives—containing good-sized colonies—in the apiary and in the wire-covered house, by pushing sound grapes into the opening, so close together that the bees could not pass through. By this means the bees were confined to the hives for days in succession, not being able to break down and remove the grapes, and although the skins of the grapes next the inside of the hive were polished smooth none were broken or injured.

The past season furnished an excellent opportunity to observe the capacity of bees, under so exceptional circumstances, to injure fruit, for the drouth was very exceptional both in duration and severity, and I was called to several places by fruit-growers to witness the proof that bees were "tearing open the skins of the grapes," and otherwise behaving in a manner altogether unworthy of an insect enjoying a wide reputation for virtue and orderly living. In each instance I succeeded in convincing the fruit-grower that the bees were simply performing the office of gleaners; that violence from other sources, or over-ripeness or decay had preceded the bees, and that he would be acting the part of wisdom in follow-



ing the example of the bees in gathering the grapes before further violence, or the action of the elements, rendered them worthless.

After grapes have been subjected to such violence, or have so far burst open and decayed as to make it possible for bees to injure them, and the circumstances are so exceptional as to lead the bees to seek such food, unless they are speedily gathered they would soon become worthless if unmolested. During the past season I made many visits to vineyards, one located near the apiary I visited every day, and my observations and experience with bees in confinement, and those having free access to the vineyards furnishes abundant proof to convince me that bees do not and cannot under any circumstances injure sound fruit. If from any cause the pulp is exposed, such as the attack of birds or wasps—the most common source of injury—or from the ovipositing of insects, or bursting of the berry from over-ripeness, and if no other resources are available, the bees appropriate and carry away the juice, and the extent of the injury depends upon the degree to which the pulp is exposed, the sweetness of the juice, and the number and necessities of the bees.

Florida Dispatch.

### Apicultural Outlook in Florida.

JOHN Y. DETWILER.

The outlook for the future of apiculture in this vicinity is more encouraging. The past year has been one of discouragement to all whose previous interest had centered in apiculture. From present indications the black mangrove will yield sufficient bloom from the growth obtained since the frost to subsist the colonies for the coming season, provided the buds now visible secrete nectar when in bloom. "Hope deferred maketh the heart sick," is an old-time proverb, and no where has it been more apparent than in this locality among the apiarists; as all things both good and bad must have an ending, so we have every reason to expect the unfortunate result of the freeze to our apicultural interest will soon be a thing of the past.

From authentic reports of apiarists in the vicinity of Oak Hill, Eldora, Hawk's Park, and New Smyrna, the prevailing opinion is that a small surplus may be harvested, providing the colonies are in a condition to take advantage of it. Climatic influences may prevent the secretion of nectar in the buds grown on new wood, and in this matter our hopes are blasted. It is not always best to predict trouble, though it is often well to anticipate it, should past experience warrant us in so doing. Having in previous communications given some most discouraging reports regarding the situations which I had reason to believe should not be concealed, I now feel the time is not far distant (next season at the most) that it will be in a great measure profitable to come to New Smyrna and vicinity to

engage in apiculture, providing the climatic influences in relation to honey-production in Florida be taken into consideration.

"Smart Alecks," and those who know it all, are just as welcome in our ranks as any, and after they pass a season or two and gain experience in our methods, are as good citizens and neighbors as those who come prepared to profit by the experience of those who are competent to advise.

New Smyrna, ☉ Fla.

For the American Bee Journal.

### The Symptoms of Foul Brood.

GEO. H. HOYLE.

When I wrote on this subject, on page 601 of the BEE JOURNAL for 1886, it was my intention to follow the article with others throwing more light on this much-disputed question. It so happened that I could not spare the time, and instead of doing as I intended, it has been nearly a year since I have written anything on the subject. In that time there has been a great deal written that I wished (but I lacked the time) to reply to. I expect to do so in the near future.

Before commencing on the part of the subject I wished to write about now, I want to contradict an assertion I saw somewhere in the AMERICAN BEE JOURNAL something like this: "We all know that it has been proven by scientists that foul brood is caused by bacteria." I say, we do not know anything of the kind. If we did, I am sure I would not have written what I have. If the reader would like to know how far it has been proven, let him look first on page 741 of the AMERICAN BEE JOURNAL for 1884, and he will see that Mr. Frank Cheshire is using the best means known to settle the question. As to whether he was successful, I will refer the reader to the *British Bee Journal* for May 13, 1886. As I was not taking that paper in 1885, I do not know how Mr. Cheshire explains his failure; but failed he must, as any one can see by looking up the paper to which I referred. There are a great many experiences recorded by practical apiarists that contradict the assertion quoted above; but it is not the object of this article to enter any further into that branch of the subject.

On page 616 of the AMERICAN BEE JOURNAL for 1886, Mr. T. F. Bingham writes of Prof. McLain's article on page 584, thus: "It will be noticed that while all the older writers on bee-diseases have regarded foul brood as its name implies, viz: a disease of the brood, and not of the older and mature bees; while the article above referred to avers that bees crawled out of the hives to die by tens of thousands;" and further, "It is of importance to bee-keepers that we have just such descriptions of any malady which may in a single apiary occur." I have known for nearly two years that old bees, as well as the larvae, would be diseased. I noticed the disease in the adult bee just by

mashing one which had stung me; and the excrement, instead of being a yellowish color, was black; and afterwards I noticed that where they were disturbed, and in consequence spotted their hives, the spots were black.

But the old bees having the disease is not the cause of so many bees leaving the hives to die; for they are, as the Professor has probably noticed, young bees leaving the hive for the first time, and the last being deformed and useless in the hive they leave it. I believe the old bee to be short-lived in such cases; and some must of course be slightly deformed, as will be seen presently, but not enough probably to unfit them for their duties, but it may cause them to die sooner than sound and healthy bees, though they were fed healthy food instead of the stuff which made them sick while in the larval state.

Now as to why the bees are deformed and how, I will explain to the best of my ability: I go to a diseased hive, lift out a new comb filled with unsealed larvae, hold it up to the light, and I cannot find a larva but what has the disease, though some have it worse than others. I put the frame back, and wait to see how they hatch out. We will suppose it is a pretty bad case, and will say 10 per cent. did not hatch, and 5 per cent. were removed before they were sealed up. Well, as there is there are more stages of the disease than one can imagine, of course these unhatched larvae die in every stage of growth, from the time they are sealed until they hatch out. Some die in the act of biting the caps of their cells; some hatch and have not life enough to get out of the hive, and are dragged out. Some hatch with no wings, some with one wing. The majority that leave the hive look all right, but of course something is the matter with them, or they would not leave.

Sometimes bees do not seal larvae, but let them grow until they fill their cells, then elongate the cells. I never knew a bee to hatch from such a cell that was of any value; and they are seldom able to come out of their cells. As so many bee-keepers have witnessed these elongated cells, who "never saw a case of the disease" (?), I am likely to have no little opposition on this particular point if I call it a symptom of foul brood; I call it that, nevertheless. Though there are some diseased colonies where the bees do not make elongated cells over diseased larvae, it never occurs where there is no disease.

It will be seen from the above that a bee-keeper can have the disease in his apiary every year, it not being severe enough to kill many larvae, and he never notices it. If he does notice it he would think nothing of it, as he is not looking for the disease to appear in discolored larvae—he is looking for sunken caps with a small hole in the top. It may not make its appearance in the last-mentioned way—the causes may have disappeared before it has so far progressed. But whether it does appear that way or not, the soonest way to discover the disease is by the discolored larvae, by which

manner a close observer will detect it at least three weeks before he would see sunken caps.

I claim that the disease is caused by unfit food, and most invariably "honey-dew;" and of course the honey must be removed from the hive before the disease can be cured. If the bees continue to get this "honey-dew" that gave them the disease, why, any remedy will fail! If the flow of mean honey is of short duration, and they get little of it, it will do them very little damage; but if they get a hive full of the stuff, and are obliged to use it, it is sure death. I mean the kind that is most unfit. Some will cause the disease, but in so light a form that it amounts to nothing.

I want to caution bee-keepers on one particular point, and it is this: Under no circumstances should they use honey from the hive of a diseased colony without first boiling it. If you never neglect this caution, you can, I believe, be successful every time with Prof. McLain's remedy or Mr. Cheshire's remedy. But if you neglect what I tell you in this particular, I know you will fail with Mr. Cheshire's remedy, and I believe you will fail with the remedy Prof. McLain gives us.

In my next article I want to say something of the Jones remedy; and also something to those who do not think the disease was "in my apiary."

Mobile, 9 Ala.

[This subject is very important, and all apiarists should be informed on the various phases of the disease, so as to be able to detect it in any stage, or in any of its different forms.

The pamphlet on this disease, by Mr. Frank Cheshire, will repay the careful perusal of every one who keeps bees, for he treats the subject so thoroughly and practically, and so carefully describes his experiments, that it becomes exceedingly interesting.—Ed.]

For the American Bee Journal.

### The "Two-Part" Super.

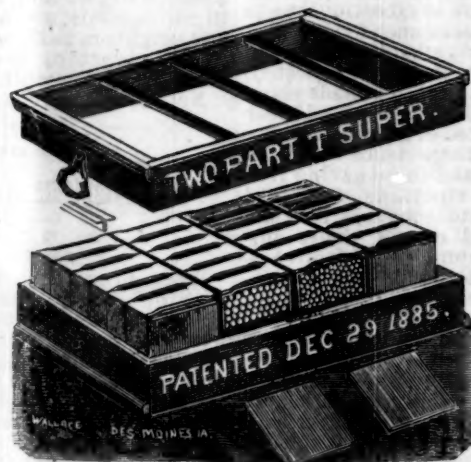
J. M. SHUCK.

The cuts show quite specifically the offices of the different parts. The sections are set in on part, and the separators rest between the ends of the rows of sections and the sides of the super. Then separators protect the sides of the super from deposits of propolis, and prevent the end sections in the rows sticking to the super. The blanks at the tops and bottoms of the sections prevent the deposit of propolis on the sections, and as Dr. Tinker says of this super, "The protection against propolis is very perfect."

The T-shaped supports for the sections are made of wood and metal, by simply nailing hoop iron to the outer edges of the partitions; these parti-

tions may be the full depth of the part-case or less. These supports may be made of tin, as shown in the cut, but they are not so substantial, and are no cheaper. There are few places in a bee-hive where even the

of colonies of bees in California, the only source of information being the assessors' returns, which are always under rather than over the mark. It is certain, however, that there are between 65,000 and 75,000 colonies, and



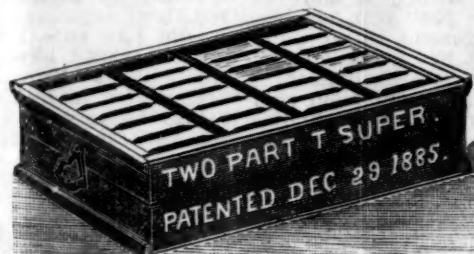
SUPER WITH UPPER PART LIFTED.

best grades of tin are strong enough for profitable use.

The T-rails, as shown in this cut, are nailed in place, and the super is quite stiff and serviceable, and ought to last during the life of the average bee-keeper. The parts of the super are easily slipped off the sections in a

possibly more, and these are mostly in the five southern counties—Ventura, Santa Barbara, Los Angeles, San Bernardino and San Diego.

The first bees introduced into the State (four swarms in number) were brought from New York via Panama, at great expense and trouble, and



SUPER COMPLETE.

body, and scarcely any scraping of propolis is ever needed. The super is invertible, no adjustments being necessary except to place properly on the hive. Bee-space is provided on both sides of the super.

Des Moines, © Iowa.

Country Gentleman.

### Honey Industry of California.

G. F. WRIGHT.

The bee and honey interest of California has, since the settlement of the State by whites, grown to the most remarkable proportions. How important it is, may be partially realized when it is known that reliable estimates put the probable yield this season at considerably over 5,000 tons. There being no organization of bee-men here, it is exceedingly difficult to arrive at an idea of the number

when they reached California they were readily sold for \$200 per hive. For some time thereafter not less than \$50 a colony was paid; but now, so great has been the increase, it is possible to buy them in good condition from \$1 to \$5.

All through the southern part of the State the traveler will find the mountain canyons occupied by "bee-ranches," as they are called, and the owners of which will almost invariably be found to be men who have come out here for their health. In bee-keeping they find a combination of healthful out-door employment, and fair remuneration, which is the great desideratum of many semi-invalids. These ranches are mainly situated on unsurveyed government land, and are chosen for their proximity to an abundance of natural bloom, and to supplies of water. At first, many paid all their attention to the bees, and depended upon them entirely for



support. It has been the experience of many, however, that it was useless to expect a "good season" oftener than every other year, and in consequence, fruit growing and small farming have largely been added to the keeping of bees. This has been rendered all the more necessary, too, by the extremely low prices at which honey has been held of late years. A fine quality of the extracted article sells for no more than  $3\frac{1}{2}$  to  $4\frac{1}{2}$  cents a pound in San Francisco, while comb honey brings 8 to 10 cents. With the high freights prevalent here, it may readily be seen that the margin is narrow for profit. The yield, however, is so far in advance of what is known at the East, that low prices do not mean here what they would there.

It may be set down as an invariable rule that in California, it is not advisable to place one's entire dependence upon the work of the bees, no matter how apparently favorable the outlook may be.

The hives now generally in use in this State are, first, a modification of the Langstroth, with an upper story adapted either for section-boxes or extracting frames. In San Diego the Harbison hive has many admirers. This is made all in one piece, with a movable back hung on hinges, the brood-chamber being protected by glass. It is a hard hive to handle, however, being subject to warping in the hot sun, and many bee-men would not take them as a gift.

In extracting, the honey is mostly drawn off into barrels, or into tin cans holding five gallons each, which are then sent to San Francisco. The cans are packed two in a case, like coal-oil cans, and afford an easy means of handling.

Much of the extracted honey here produced is so colorless, and unmarked by strong flavor, that it may be used for every purpose for which sugar is usually utilized, without its presence being suspected. In the writer's family, for many months, not a pound of sugar was consumed, but extracted honey was used in tea and coffee, in making preserves, and in all culinary operations, and it gave the utmost satisfaction.

A great deal of the extracted honey has been shipped in barrels on board ship directly to Europe, and good prices have been realized. The length of time, however, before returns can be received from such shipments, is a drawback to many engaging therein.

While the California bee-keeper does not receive such high prices for his honey as does his Eastern brother, there is one advantage which he possesses which is simply superlative. This is the fact that at all seasons of the year the hives remain in one place, requiring no protection whatever from the weather. The wintering of the bees has no terrors for the California apiarist. His hives stand in the shelter of a row of trees, or possibly with a brush shed over them for 365 days in the year, and there is not a day, winter or summer, when the sun is shining, that the inmates are not out and at work on the flowers which may be found at all seasons.

So far no effort seems yet to have been made by any one to provide the bees with a sufficiency of pasturage when the natural bloom for any reason is not abundant. The white sage is the principal mainstay of the apiarist here, but it frequently happens from peculiar climatic causes, that the flowers of this plant do not possess their normal sweetness, and in this case the yield of honey is light. There seems no good reason why flowers could not be planted in sufficient quantity to obviate the placing of entire dependence upon the natural bloom, and so make the bee-keeper independent of the baneful effect of poor seasons.

San Francisco, Cal.

### Local Convention Directory.

1887. Time and place of Meeting.

Nov. 16-18.—North American, at Chicago, Ills.  
W. Z. Hutchinson, Sec., Rogersville, Mich.

Dec. 7-9.—Michigan State, at East Saginaw, Mich.  
H. D. Cutting, Sec., Clinton, Mich.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

### SELECTIONS FROM OUR LETTER BOX

**Good Crop Expected.**—W. H. H. Shreckengast, Pattonsburg, Mo., on June 10, 1887, writes:

On page 363, Mr. D. D. Herrick says, "My first swarm issued on May 14. Who is ahead of that?" I am. My first issued May 9, and another on May 20, from the same colony. Our prospects for a honey crop in this locality are good.

**Honey Crop in the South.**—J. M. Jenkins, Wetumpka, Ala., on June 10, 1887, says:

My honey crop is almost a failure, and I have received similar reports from many others in the South. With me, the honey flows in April and May, and the most of that time was covered by a drouth. My location is nothing extra for honey, at best.

**Rearing Queens.**—H. Griffin, Kilgore, Ky., writes:

First make a queen-nursery with a board just the size of a frame, bore 3 rows of 2-inch holes in it, tack wire-cloth on one side, and put little tin doors over the holes on the other side. Whenever a colony swarms, cut out all the queen-cells, and put them in the nursery, having first put some "Good" candy made of powdered sugar and honey; put the nursery in the hive from which the queen-cells were taken out, and when the cells hatch out they will live 10 days. This is a good plan for beginners who have a few Italian bees, and want a few queens for their own use.

**Dry Weather—Motherwort.**—S. Burton, Eureka, Ills., on June 14, 1887, writes:

White clover is a failure on account of dry weather. It is exceedingly dry in this part of the State, although bees are doing very well; they are working on red clover. The Italians are doing better than the blacks; they are storing some surplus, while the blacks have no surplus yet. The linden promises a good crop at this time. I have had no swarms yet.

I send a sample of a plant that grows on my place, and I do not know what it is. The bees work on it from early morn until late in the evening, almost swarm on it. Please give its name. There must be lots of honey in it, as the bees do not gather any pollen from it, for I have watched them closely. It began to bloom on June 1, and grows about 2 feet high. The first that I noticed of it, was some two years ago. I have quite a patch of it now.

[It is motherwort, and is an excellent honey-producer. It is usually covered with bees from the time it blooms until the last flower withers. It is an excellent plant to sow in waste places.—Ed.]

**Gathering Dark Honey, etc.**—B. T. Davenport, Aurorahville, Wis., on June 13, 1887, says:

Bees wintered rather poorly, I think owing to the unusual amount of honey-dew gathered last season. We have had a terribly dry spring, so we do not expect much clover honey. Bees are beginning to get honey now, but it is quite dark; I never knew of bees getting dark honey before in June, when white clover (what there is) is in bloom. They are working on the first crop of red clover more than common, as the blossoms appear to be stunted. Is this where the dark, thick, and quite pleasant honey comes from? Linden is going to blossom full.

**Poorest Prospects for 15 Years.**—S. W. Morrison, Oxford, Pa., on June 11, 1887, writes:

There has not been for 15 years so poor a prospect for a crop of honey as at present. Usually one-half of the crop is stored at this date, but many good colonies to-day will starve if not fed. Rains, winds, and cold weather are too great obstacles for Carniolans even, to overcome.

**Roaring Bees.**—Samuel Wilson, Cosby, Tenn., says:

In reply to Mr. Demaree's request, I will say that I have wintered bees on the summer stands for nine years, and when it is  $20\frac{1}{2}^{\circ}$  below zero, I find that my bees roar. The colder it is, the more they roar, from a certain degree that keeps them the most quiet.

**Crop Cannot be Large.**—B. A. Manley, Milo, Iowa, June 9, 1887, writes:

Our honey crop in this (Warren) county cannot be large, though the recent showers may improve it somewhat. White clover is blooming profusely, but there is not sufficient moisture in the ground to give it any vitality. Of course bees make quite a show at work on these weakly blossoms—more show than honey stored. Along the streams are good linden groves, and we are looking forward to an improvement when they bloom. I think a good rain would put a new face on the matter.

**Exceedingly Discouraging Prospects.**—J. V. Caldwell, Cambridge, Ills., on June 10, 1887, says:

Bees here are doing little or nothing. I have not had a swarm yet, and not one of my 200 colonies is working in the sections. We are having extremely dry weather, with cool nights and north winds. Bees are in good condition, but it looks as though we will not have a pound of surplus clover honey in this locality.

**Wintered on Honey-Dew, etc.**—Chas. Solveson, Nashotah, Wis., on June 14, 1887, writes:

As I stated in the valuable AMERICAN BEE JOURNAL, that I put my bees away last fall upon stores composed largely of thick, black "honey-dew," perhaps some would like to know how they "pulled through" the winter. On April 8, I removed them from the cellar and found only 7 dead colonies out of 90; since then as many more have dwindled and have been robbed; this with some sales of bees and queens, leaves me with 65 colonies to begin the season with. Considering the "stuff" they had to winter on, I think they did well. White clover has been in bloom since June 5, but as yet the bees have gathered no honey, and the indications are that we will have but little surplus from clover, as it is drying up for want of rain.

**My Experience with Bees.**—Levi Richards, Ellison Bay, Wis., on June 15, 1887, says:

I got 3 colonies of bees last fall and put them in the cellar under the house on Nov. 15, 1886, and took them out on April 26, 1887, and they went right to work on the same day carrying pollen from the poplar; and they have not been idle a single day. They have built up, and are now strong, excepting one which came out of the cellar weak, but it is doing well also, as I crowded them together in the spring, and now I have but two frames more to put in, then it will be strong also. I think that here is a good place for bees, for we have plenty of poplar, willow, maple (soft and hard); also some kind of willow which blossoms now, that looks more like maple. Then we have linden and white clover

which is now just commencing to bloom, and the country is just full of raspberries and blackberries, but I am a beginner and have to learn much yet. I have 1 colony of hybrids, and 2 of Italians. We have had but little rain this spring, so it is pretty dry. There are no bees nearer than 16 miles from me.

**Bees Roaring in Winter.**—A. D. Keller, Firth, Nebraska, on June 7, 1887, says:

This is my seventeenth year in beekeeping, and I have kept from 5 to 626 colonies at different times. Of late years I have wintered them on the summer stands, placed very close together in rows, and packed with chaff, straw, etc., with a ventilating tube in front of the hives. If there was any hum or roar I certainly could have heard it very distinctly, by placing my ear at one end of this long ventilating tube. But I did hear something, and this is what I heard when the temperature was slightly below zero: A low, gentle hum, and the colder the louder. From zero to 30° or 40° above, not a sound could be heard; from 40° above, and warmer, a loud hum could be heard, the warmer the louder. If my bees had not been packed they would have commenced to roar before it became so cold. Thus we see the difference of opinion.

**Poor Prospects for a Good Crop.**—12—Mrs. A. B. Winder, (50), Grand View, Iowa, on June 12, 1887, writes:

Our long drouth was broken to-day by a very welcome rain of three hours' duration. I fear it has come too late to benefit the bees very much, as the white clover has about all dried up. I had 53 colonies put in the cellar on Dec. 8; they wintered well with the loss of only one colony. I have lost one since putting them out, and sold one, which leaves me 50 to begin the season with. They are all strong in numbers, but short of stores, as they have not gathered honey enough to keep them. I have had to feed them. The prospects for a good crop of honey this year are very poor. Last year I got 4,000 pounds of honey from 43 colonies.

**Plenty of Bees, but no Honey.**—M. S. Roop, Council Bluffs, Iowa, on June 10, 1887, writes:

Bees wintered very poorly in this part of the country the past winter, and the prospects for a honey crop appears to be slim. We have had but two good showers this spring. White clover is about all dead. Our only show is for a fall honey flow. Basswood is very uncertain here. To-day our hives are full of bees, and nothing for them to eat.

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## Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

### CHICAGO.

HONEY.—Prices are about 10@12c. for comb, Extracted 5@7c., according to quality and packages. Stocks and demand light.  
BEESWAX.—22c. R. A. BURNETT, June 9, 161 South Water St.

### DETROIT.

HONEY.—Best white comb, 11@12c. Market is nearly bare, awaiting the new crop.  
BEESWAX.—23@24c. M. H. HUNT, Bell Branch, Mich. June 10.

### SAN FRANCISCO.

HONEY.—We quote: Extracted, white, 5@5½c.; light amber, 4½@5c.; amber, 4¼@4½c. Comb, white, 12@14c.; amber, 7@10c. Demand very good.  
BEESWAX.—22@24c. Jun. 13. SCHACHT & LEMCKE, 123-124 Davis St.

### CLEVELAND.

HONEY.—Choice white in 1-lb. sections, 12@13c.; second quality, 10@11c.; and buckwheat unsalable at 8@9c. Extracted, 5@6c.  
BEESWAX.—25c. Apr. 20. A. C. KENDEL, 115 Ontario St.

### ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 3¼@4¼c. Extra fancy, ¼ more than foregoing prices. Extracted, 4¼@6c. Market dull.  
BEESWAX.—Steady at 20¼c. for prime. May 20. D. G. TUTT & CO., Commercial St.

### SAN FRANCISCO.

HONEY.—We quote: White comb, 12@14c.; amber, 7@10c. Extracted, white, 4½@5c.; light amber, 3¼@4¼c. Market quiet.  
BEESWAX.—19@21c. May 14. O. B. SMITH & CO., 423 Front St.

### MILWAUKEE.

HONEY.—Choice white 1-lb., 12@12½c.; choice 2-lbs., 10@11c.; dark not wanted, and imperfect slow. Extracted, finest white in kegs, 6¼@7c.; in white in kegs and barrels, 6@6½c.; dark, 4 to 4½c.; amber, in barrels, 4½@5c. Demand limited and supply small.  
BEESWAX.—25c. June 10. A. V. BISHOP, 142 W. Water St.

### NEW YORK.

HONEY.—We quote: White comb, 9@12c.; dark 5@7c. California comb, 8@9c.; extracted, 5@6c. Sales large and demand good.  
BEESWAX.—23@24½c. McCaul & Hildreth Bros. May 10. 25 & 30 W. Broadway, near Duane St.

### KANSAS CITY.

HONEY.—We quote: White clover 1-lb., 10@12c.; dark, 9 to 10c. White clover 2-lbs., 10 to 11c.; dark, 9 to 10c. Extracted, 5 to 6c. in small way. Market almost bare of comb and extracted honey. Jun. 16. CLEMONS, CLOON & CO., cor 4th & Walnut

### BOSTON.

HONEY.—1-lb. packages of white clover honey at 13@15c.; 2-pounds at 11@13c. Extracted, 5@7c. Sales slow.  
BEESWAX.—26 cts. per lb. Apr. 22. BLAKE & RIPLEY, 57 Chatham Street.

### CINCINNATI.

HONEY.—We quote for extracted, 3@7c. per lb. Best comb brings 11@14c. Demand improving.  
BEESWAX.—Good demand, —20@22c. per lb. for good to choice yellow. Jun. 11. C. F. MUTH & SON, Freeman & Central Av.

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**To Correspondents.**—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

**As there is Another firm in Chicago by the name of "Newman & Son,"** we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

**We will Present Webster's Dictionary** (pocket edition), and send it by mail, postpaid, for two subscribers with \$2. It is always useful to have a dictionary at hand to decide as to the spelling of words, and to determine their meaning.

**Money Orders** can now be obtained at the Post Offices at reduced rates. Five dollars and under costs now only 5 cents. As these are absolutely safe, it will pay to get them instead of the Postal Notes which are payable to any one who presents them, and are in no way safe.

**Red Labels** for one-pound pails of honey, size 3x4½ inches.—We have now gotten up a lot of these Labels, and can supply them at the following prices: 100 for \$1.00; 250 for \$1.50; 500 for \$2.00; 1,000 for \$3.00; all with name and address of apiarist printed on them—by mail, postpaid.

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**Yucca Brushes** are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructible. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

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